

# Work Order ID 66398

Monday, February 14, 2011 10:55:38 AM

Page 1

Item ID: D2933-1

Revision ID:

Item Name: Saddle LH In, 206

Start Date: 2/15/2011 Start Qty: 4.00

Required Date: 2/28/2011 Req'd Qty: 4.00

Reference:

Accept

Setup Start

Stop

Cust Item ID:

Customer:

Approvals:

Process Plan: *WVF*

Date: *11-02-14*

Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

Run Start

Stop

Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Tool ID

Tool #

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

Draw Nbr

Revision Nbr

D2933

Rev C

0.00



HAAS CNC VERTICAL MACHINING #1

0.00

HAAS 1

Memo

HAAS CNC vertical machine #1

Program part number and batch number. ☐ 1-Inspect part number and batch number are programmed correctly. ☐ 2-Machine Step No 1 of Folio and visually inspect as per dwg D2933 & attached Dimension Sheet ☐ 3-Machine Step No 2 of Folio and visually inspect as per

0.00

110



CONVENTIONAL MILLING MACHINE

0.00

Mill Conv

Memo

Conventional Milling Machine

Machine Keyway and inspect per attached dimension sheet

0.00

120



QC1- Inspect dimensions to dimension sheet

0.00

QC

Memo

Quality Control

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

**Work Order ID 66398**

Monday, February 14, 2011 10:55:39 AM

Page 2

Item ID: D2933-1

Accept

Setup Start

Revision ID:

Stop

Item Name: Saddle LH In, 206

Start Date: 2/15/2011 Start Qty: 4.00

Cust Item ID:

Required Date: 2/28/2011 Req'd Qty: 4.00

Customer:

Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Run Start

QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Stop

Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run Hours

Tool ID

Tool #

Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

130

QC8- Inspect parts - second check

0.00

ml 11/03/09



QC

Memo

0.00

Quality Control

4

2

140

Chemical Conversion Coat per QSI005 4.1

0.00



HandFinish

Memo

0.00

Hand Finishing

N BL 11-3-9

145

Spray Painting per QSI005 4.2

0.00



SprayPaint

Memo

0.00

Spray Painting

Prime Delfleet Blue : B 115967  
Paint Delfleet Blue : B 115989  
Clear Delfleet : B 117113

ml

11

03

10

8 to

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: D2933-1 PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_

R: Yes ☒ No ☐ DQA: [Signature] Date: 11/03/28

Resolution: \_\_\_\_\_ Disposition: NO NCR

N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR: <u>66398</u>		WORK ORDER I _____				: (NCR)			
DATE	STEP	Description of NC Section A	Corr		Sign & Date	Verification Section C	Approval Chief Eng	Approval QC Inspector	
			Initial Chief Eng						
11-03-17	145	product line of deflected changing to lower Voc's supplier misinformed + sent wrong clear	<u>[Signature]</u> 11/03/18	SCUF update QSR 005 F3118 + F3821 1 to 1 + 1 tol mixture 3 parts to 1 part F3210 + 1/2 part F3330 ACCEPTABLE PER ATTACHED EMAIL.	11-03-17	S 11/03/18	<u>[Signature]</u> 11/03/18 QSR 002	S 11/03/18	

NOTE: Date & initial all entries

# Work Order ID 66398

Monday, February 14, 2011 10:55:39 AM



Page 3

Item ID:	D2933-1	Accept		Setup	Start	
Revision ID:						
Item Name:	Saddle LH In, 206				Stop	
Start Date:	2/15/2011	Start Qty:	4.00			
Required Date:	2/28/2011	Req'd Qty:	4.00			
Reference:						

Approvals:	Process Plan:	Date:	Tooling:	Date:	Run	Start	
	QC:	Date:	SPC (Y/N):	Date:		Stop	

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
160  QC Quality Control	<del>QC3- Inspect Part Finish</del> QC14 Memo	0.00 0.00				<u>14</u>			
170  Packaging Packaging	Identify as per dwg & Stock Location: <u>421</u> Memo	0.00 0.00							<u>11/3/21</u> (4)
180  QC Quality Control	QC21- Final Inspection - Work Order Release Memo	0.00 0.00							<u>11/3/21</u> (4)

11-03-21  
(4)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval <sup>3</sup> QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Picklist Print

Monday, February 14, 2011 10:55:34 AM

Work Order ID: 66398



Parent Item: D2933-1



Parent Item Name: Saddle LH In, 206

Start Date: 2/15/2011

Required Date: 2/28/2011

Start Qty: 4.00

Required Qty: 4.00

Comments: IPP: B 00.06.26 New DWG rev (mpp 2069) EC  
IPP Rev: C As per Rev C 07-03-19 JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D6101-001 		Manufactured	No			100	Each	44.0000	1	4			

Saddle Billet

Location	Loc Qty	Loc Code
MAT40	44	
✓ 61385	2	
✓ 63537	2	
64777	40	

2.0  
2.0

B.A 11/03/07

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

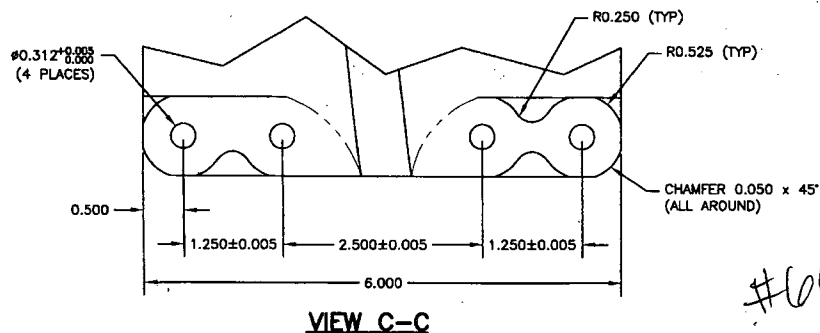
Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

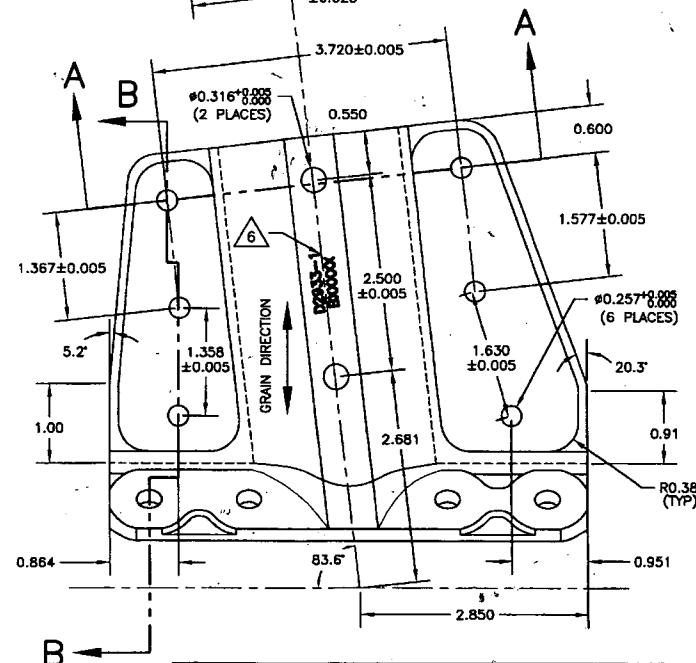
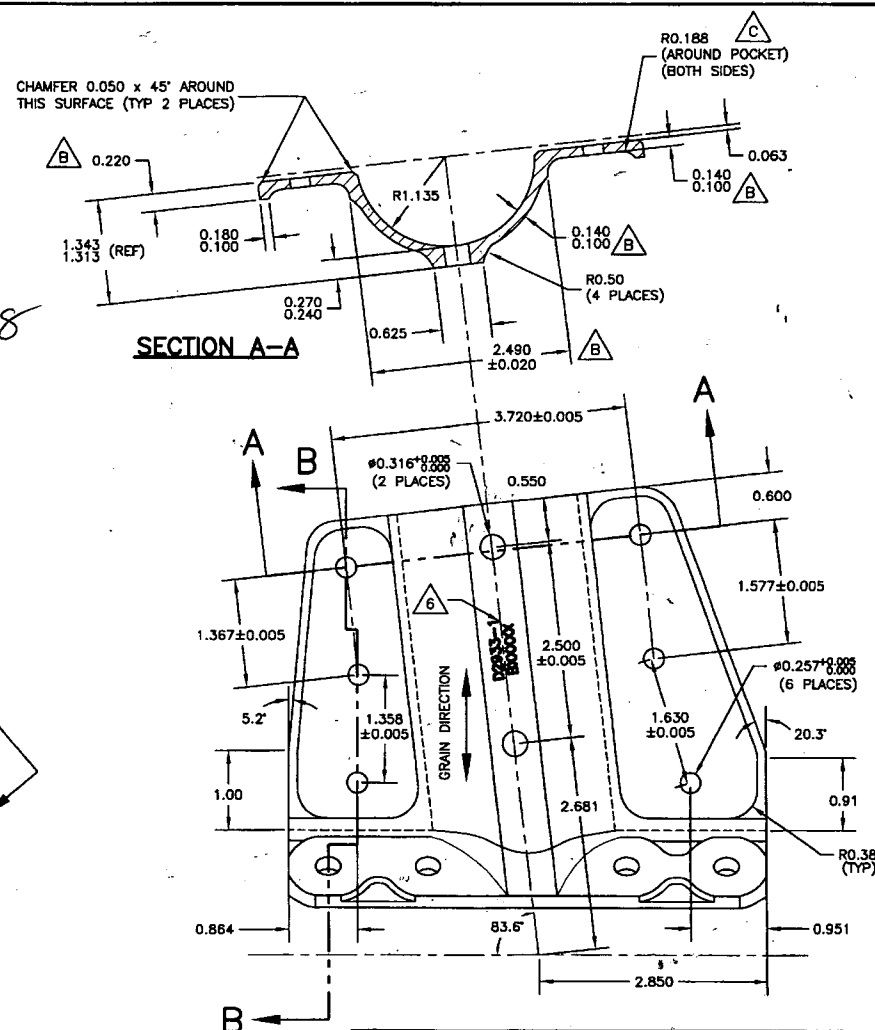
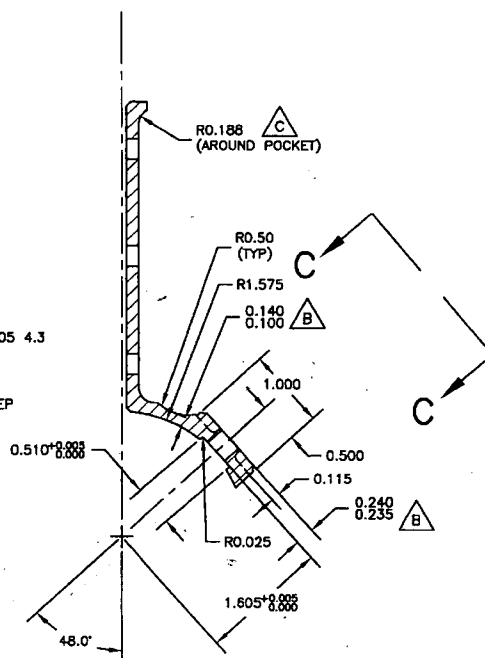




**D2933-1 LH SADDLE (SHOWN)**  
**D2933-2 RH SADDLE (OPPOSITE)**

**NOTES:**

- 1) MATERIAL: ALUMINUM 7075-T7351 (QQ-A-250/12)  
 (MAKE FROM D6101-001 SADDLE BILLET, 7075)
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1  
 POWDER COAT GLOSS WHITE (REF 4.3.5.1) PER DART QSI 005 4.3
- 3) BREAK ALL SHARP EDGES 0.010 TO 0.020
- 4) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED.
- 5) ALL DIMENSIONS ARE IN INCHES
- 6) ENGRAVE PART AND BATCH NUMBER IN THIS AREA 0.010 TO 0.015 DEEP



C	06.11.09	R0.188 WAS R0.30 TO R0.25
B	00.05.29	CHANGED GEOMETRY AND MATERIAL
A	99.10.29	NEW ISSUE
DESIGN	DRAWN BY	DART DART AEROSPACE USA, INC.
CHECKED	APPROVED	DART DART AEROSPACE USA, INC.
DATE	TITLE	DART AEROSPACE USA, INC.
06.11.09	SADDLE INSIDE	REV. C
		SHEET 1 OF 1
		SCALE
		2:3

COPYRIGHT © 1999 BY DART AEROSPACE USA, INC.  
 THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL  
 AND IS SUPPLIED ON THE EXPRESS CONDITION  
 THAT IT IS NOT TO BE USED FOR ANY PURPOSE  
 OR COPIED OR COMMUNICATED TO ANY OTHER  
 PERSON WITHOUT WRITTEN PERMISSION FROM  
 DART AEROSPACE USA, INC.

07.02.12

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

<b>DART AEROSPACE LTD</b>		<b>Work Order:</b> 60398	
<b>Description:</b> 206 Saddle, Inboard, Left side		<b>Part Number:</b> D2933-1	
<b>Inspection Dwg:</b> D2933 <b>Rev:</b> C <b>DSK:</b> <b>Rev:</b>		<b>Page 1 of 1</b>	

### FIRST ARTICLE INSPECTION DIMENSION SHEET

☒ **First Article**
☐ **Prototype**

				Record Actual Dimensions				
Dim	Min	Max	Go/No Go Gauge	1	2	3	4	
A	0.100	0.140		0.116	0.116	0.118	0.117	Mic / 118-119
B	0.100	0.140		0.112	0.114	0.114	0.112	"
C	0.100	0.140		0.117	0.118	0.116	0.117	"
D	0.210	0.230		0.225	0.226	0.226	0.226	Vern / 6A-01
E	1.245	1.255		1.250	1.250	1.250	1.250	"
F	1.245	1.255		1.250	1.250	1.250	1.250	"
G	2.495	2.505		2.500	2.500	2.500	2.500	"
H	0.510	0.515		0.511	0.511	0.511	0.511	"
I	1.572	1.582		1.577	1.577	1.577	1.577	"
J	2.495	2.505		2.500	2.500	2.500	2.500	"
K	0.257	0.262		0.259	0.259	0.259	0.259	"
L	0.312	0.317		0.315	0.315	0.315	0.315	"
M	0.235	0.240		0.238	0.238	0.238	0.238	"
N	0.100	0.140		0.110	0.110	0.110	0.110	Mic / 6A-03
O	0.540	0.560		0.549	0.549	0.549	0.549	Vern / 6A-01
P	0.490	0.510		0.500	0.500	0.501	0.499	"
Q	3.715	3.725		3.720	3.720	3.720	3.720	"
R	2.470	2.510		2.492	2.492	2.492	2.492	"
S	0.240	0.270		0.255	0.255	0.255	0.255	"
T	0.100	0.180		0.135	0.135	0.135	0.135	"
U	1.625	1.635		1.630	1.630	1.630	1.630	"
V	1.362	1.372		1.367	1.367	1.367	1.367	"
W	0.316	0.321		0.317	0.317	0.317	0.317	"
X	1.125	1.145		1.135	1.135	1.135	1.135	Dial / 49852
Y	1.565	1.585	1.577	1.577	1.577	1.577	1.577	"
Z	0.178	0.198		0.188	0.188	0.188	0.188	R-6 / ref.
AA								
AB								
AC								
AD								
AE								
Accept/Reject								

<b>Measured by:</b> BA	<b>Date:</b> 11/03/07
<b>Audited by:</b> [Signature]	<b>Date:</b> 11/03/07
<b>Prototype Approval:</b> N/A	<b>Date:</b> N/A

Rev	Date	Change	Revised by	Approved
A		New Issue	RF	
B	02.12.12	Re-format; Added Dim. X-Y, DT8683, DT8686, DT8690 & DT8695 A/B	KJ/RF	
C	06.10.03	Removed DT8683, DT8686 & DT8690	KJ/JLM	
D	07.03.21	Revised per drawing revision C	KJ/JLM	
E	08.01.16	DT8695 A/B removed from dimension Y	KJ/EC/DD	

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

## **Linda Lacelle**

---

**From:** David Shepherd <dshepherd@dartaero.com>  
**Sent:** March 18, 2011 11:14 AM  
**To:** 'Marc Bellavance'; 'Linda Lacelle'  
**Subject:** RE: D206-642-441B Skidtubes

Linda/Marc,

I was concerned that we had discovered a chemical incompatibility between the new paint and the clear and that is why we had to re-clear the skidtubes. Scuffing and re-clearing the skidtubes to a matte finish is acceptable to me.

David

**From:** Marc Bellavance [mailto:mbellavance@dartaero.com]  
**Sent:** Friday, March 18, 2011 9:04 AM  
**To:** 'Linda Lacelle'; 'Shepherd, David'  
**Subject:** RE: D206-642-441B Skidtubes

Linda, please call David, he has one or a few questions for you...

**From:** Linda Lacelle [mailto:llacelle@dartaero.com]  
**Sent:** March 18, 2011 9:32 AM  
**To:** 'Marc Bellavance'; 'Shepherd, David'  
**Subject:** RE: D206-642-441B Skidtubes

The skids were already scuffed, and the new clear was applied...these are suppose to ship today

**From:** Marc Bellavance [mailto:mbellavance@dartaero.com]  
**Sent:** March 18, 2011 9:25 AM  
**To:** Shepherd, David  
**Cc:** Lacelle, Linda  
**Subject:** D206-642-441B Skidtubes  
**Importance:** High

Good morning David,

Ian came to see me this morning re Delfleet product line changing to lower VOC's. The supplier was misinformed and sent us the wrong clear. Now the skidtubes must be scuffed and re-cleared. Also, this will affect QSI 005 since the mixture must be changed. A W/O NCR has been filled out by Ian on all the W/O's ( but we need your approval on this prior to signing off them off.

Call me if you have more questions, I'll answer with what I have and know about this issue.

Thanks,

**Marc Bellavance**  
**Technical/Shop Support**